IN THE SPECIFICATION:

On page 29 to 30, please amend the paragraph beginning on page 29, line 21 and ending on page 30, line 8 as follows:

When non-destructive reading operation B_4 is complete, an image processing circuit 111 calculates $OUT(B_4) - OUT(B_0)$ by using the charge amounts obtained by non-destructive reading operations B_0 and B_4, and outputs the resultant value. This calculation is performed for all pixels. The image processing circuit 111 displays the image sensed by using the obtained output on a monitor 112 or stores it as image data in a recording medium 113. As the X-ray image sensing panel 120, a panel having pixel portions arranged two-dimensionally is used. However, a panel having pixel portions arranged one-dimensionally may be used. In this embodiment, the image processing circuit calculates ~~$OUT(B_4)$~~ $OUT(A_1)$ - $OUT(B_0)$. However, the X-ray image sensing panel may incorporate ~~incorporates~~ a difference circuit.

On page 30, please amend the paragraph beginning on line 9 and ending on line 14 as follows:

In the first embodiment, since ~~$OUT(A_1)$~~ $OUT(B_0)$ - $OUT(A_0)$ = output, ~~$OUT(A_1)$~~ $OUT(B_0)$ and $OUT(A_0)$ contain different KTC noise components. Even if, therefore, ~~$OUT(A_1)$~~ $OUT(B_0)$ is subtracted from $OUT(A_0)$, $KTC(A_0)$ contained in $OUT(A_0)$ does not cancel out ~~$KTC(A_1)$~~ $KTC(B_0)$ contained in ~~$OUT(A_1)$~~ $OUT(B_0)$. Since KTC noise is random noise, $\sqrt{2} \times$ KTC noise remains.

On page 30, please amend the paragraph beginning on line 15 and ending on line 23 as follows:

In the second embodiment, OUT(B_0) and ~~OUT(B_4)~~ OUT(A_1) of output = ~~OUT(B_4)~~ OUT(A_1) - OUT(B_0) contain the same amount of KTC noise produced by normal reading operation A_0. If, therefore, OUT(B_0) is subtracted from ~~OUT(B_4)~~ OUT(A_1), the KTC noise contained in OUT(B_0) cancel out the KTC noise contained in ~~OUT(B_4)~~ OUT(A_1). Hence, an output free from the influence of KTC noise can be obtained. This is because no normal reading operation is performed between non-destructive reading operations B_0 and A_1 ~~B_4~~.

On pages 30 to 31, please amend the paragraph beginning on page 30, line 24 and ending on page 31, line 9 as follows:

In addition, even if output = ~~OUT(B_4)~~ OUT(A_1) - ~~OUT(A_1)~~ OUT(B_0) is calculated by using ~~OUT(A_1)~~ OUT(B_0) obtained by normal reading operation instead of the output obtained by non-destructive reading operation B_4, an output free from the influence of KTC noise can be obtained. This is because ~~OUT(A_1)~~ OUT(B_0) also contains the KTC noise produced by normal reading operation A_0. That is, an excellent radiation image sensing output containing no KTC noise can be obtained by subtracting the non-destructive reading output obtained by the image sensing means before radiation emission from the output obtained by the images sensing means obtained after radiation emission.